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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,841	12/09/2003	Seung-hoon Lee	8021-182 (SS-18122-US)	4428
22150	7590	11/01/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			LUU, MINER PHO	
			ART UNIT	PAPER NUMBER
			2824	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,841

Applicant(s)

LEE ET AL.

Examiner

Pho M. Luu

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/15/05
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-27 is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Search History.

DETAILED ACTION

Reply to Restriction Requirement

1. Acknowledgment is made of application's Reply to Restriction Requirement, with traverse, filed 15 August 2005. However, upon further consideration in view of applicant's transversal therein, the restriction requirement has been withdrawn. Therefore, claim 1-27 are pending in the application.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150** words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The disclosure is objected to because of the following informalities:

Page 2, lines 11: Please replace "TR3" with --TR2--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ahn.
(US. 5,077,689).

Regarding claim 1, Ahn in Figure 3 discloses a circuit for use in a semiconductor memory device comprising:

A direct sense amp (132) circuit for transmitting read data loaded in a bit line pair (BL, /BL) including first and second bit line to a data input/output (IO₀, /IO₀) line pair including first and second data input/output lines (data pair read out from a memory is transferred to sense amplifier 132 through bit line pair BL, /BL, see column 4, lines 18-

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20) in response to a read command signal (inherence, the read command signal is active sense amplifier 132);

an input/output gate circuit (140, 141) for transmitting the read data loaded in the bit line pair to the data input/output line pair (input/output line pair IO0, $\overline{\text{IO0}}$ are connected to sense amplifier 132 through transistor 140, 141 then the sense amplifier 132 connected through bit line pairs BL, $\overline{\text{BL}}$, see column 3, lines 53-58) and for transmitting write data loaded in the data input/output line pair to the bit line pair in response to a read/write signal (transmission transistor 140 transmit to the input/output line pair IO0, $\overline{\text{IO0}}$ in response to column selection signal 156, 0CSL, see column 3, lines 58-64).

Allowable Subject Matter

7. Claims 2-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the prior art of record do not disclose or suggest a write command in a data read operation for generating the read command signal and the read/write signal to turn ON the input/output gate and to turn OFF the direct sense AMP circuit in a data write operation.

Regarding claim 5, the prior art of record do not disclose or suggest a third sense

transistor having a first end connected to second ends of the first sense amplifier and the second sense transistor, a second end connected to a ground voltage and a gate connected to the read command signal.

Regarding claim 7, the prior art of record do not disclose or suggest a fourth sense transistor which has a first end connected to a second end of the second sense transistor, a gate connected to the read command signal and a second end connected to the second data input/output line.

Allowance

8. Claims 9-27 is allowed.

The following is an examiner's statement of reasons for allowance:

There is no teaching or suggestion in the prior art to: "a data input/output line pair including first and second data input/output lines when turn ON in response to a write block signal and a read/write signal in a data read operation and which is turn OFF in response to the write block signal in a data write operation of a sense amplifier circuit for use in a semiconductor memory device" as claimed in the independent claim 9; or

"a write/red control unit for passing the read data generated form the direct sense AMP circuit component to the data input/output line pair in response to a write block signal in the data read operation and for blocking connection between the direct sense AMP circuit component and the data input/output line pair in the data write operation" as claimed in the independent claim 18.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Sakui et al. (US. 4,943,944) disclosed a amplifier including a bit line pairs for activated the levels of bit line become determined in the semiconductor.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The examiner can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 703.872.9306 for all official communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PML
30 October 2005.


70/9/05
RICHARD ELMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800